

Remarks

The Office Action mailed December 28, 2005 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-21 are now pending in this application. Claims 1-21 stand rejected. Claims 7, 11, 17, 20, and 21 have been amended herein. Claims 9 and 10 have been canceled herein. Claims 22 and 23 have been newly added herein. Upon entry of this Amendment, Claims 1-8 and 11-23 will be pending in this application. No new matter has been added.

The rejection of Claim 11 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,163,028 (Orava) is respectfully traversed.

Orava describes an imaging support for supporting a plurality of imaging device tiles at respective tile mounting locations to define a tiled imaging surface. Each of the imaging device tiles has a semiconductor detector with a plurality of pixel cells coupled to a semiconductor substrate with a corresponding plurality of pixel circuits. The semiconductor detector and the semiconductor substrate are carried on a mount having an imaging device tile contact. The imaging support is configured for mounting each of the imaging device tiles on the imaging support in a non-destructive, removable manner at respective tile mounting locations, each of which includes an imaging support contact at a contact position. Each of the imaging support contacts are configured to cooperate with a respective imaging device tile contact, wherein the imaging device tile contact and the imaging support contact enable a signal of a type selected from a group consisting of a supply, a control signal and a readout signal to be transferred between the imaging device tile and the imaging support.

Claim 11 recites a method of replacing a detector module in a modular detector assembly including at least one existing module including an alignment datum, wherein the method includes “removing a module to be replaced from the assembly...providing a replacement module comprising at least one alignment datum...using an alignment tool comprising a body with at least two alignment datums extending thereon to position the replacement module in the assembly with respect to the existing module...and removing the alignment tool from the assembly once the replacement module has been attached within the assembly.”

Orava does not describe nor suggest a method as recited in Claim 11. For example, Orava does not describe nor suggest a method including removing an alignment tool from an assembly once a replacement module has been attached within the assembly. Rather, Orava describes an imaging device having a semiconductor detector and pixel circuits mounted on a mount, such as a printed circuit board, that assists in locating the imaging device on an imaging support but that also forms a component of the imaging device. As such, and for at least this reason, Claim 11 is submitted as patentable over Orava.

For at least the reasons set forth above, Applicant respectfully requests that the Section 102(b) rejection of Claim 11 as being anticipated by Orava be withdrawn.

The rejection of Claims 1-5, 7, 8, 11, 13-15, and 17-21 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,487,098 (Dobbs) is respectfully traversed.

Dobbs describes preassembled detector modules that each contain several detectors, and preassembled anti-scatter modules that each contain several anti-scatter plates. The detector and anti-scatter modules are mounted on a spine that is attached to the rotating gantry of a CAT scanner by adjustable end supports. A pair of dowel pins in accurately drilled reference holes in the spine control the location and alignment of each module, one in a module round hole and one in a module slot. Dimensions in the modules are referenced to the hole, the slot, and reference surfaces on the modules contact the spine so as to reduce tolerance build-up.

Claim 1 recites a method for fabricating a detector assembly, wherein the method comprises “positioning a first scintillator array on a first side of a flexible member...and positioning a first collimator array on a second side of the flexible member.”

Dobbs does not describe nor suggest a method as recited in Claim 1. For example, Dobbs does not describe nor suggest a method including positioning a first scintillator array on a flexible member, nor a method including positioning a first collimator array on a flexible member. Rather, Dobbs describes detector and anti-scatter modules that are mounted on a spine that is attached to a rotating gantry using a pair of end supports that each include a flexible mounting plate. Dobbs does not describe nor suggest that the spine is flexible. As such, and for at least these reasons, Claim 1 is submitted as patentable over Dobbs.

Claims 2-5 depend, directly or indirectly, from independent Claim 1. When the recitations of Claims 2-5 are considered in combination with the recitations of Claim 1, Applicant submits that dependent Claims 2-5, for at least this reason, are likewise patentable over Dobbs.

Claim 7 recites a method for fabricating a detector array, wherein the method comprises “providing a plurality of diode assemblies each comprising at least one alignment datum...providing a plurality of scintillator packages each comprising at least one alignment datum...providing a plurality of collimator arrays each comprising at least one alignment datum...and optically coupling each diode assembly with one respective scintillator package and one respective collimator array by aligning the alignment datums of the respective diode assembly, scintillator package, and collimator array using an alignment tool comprising a body with at least two alignment datums extending thereon, wherein the alignment tool does not form a component of the detector array.”

Dobbs does not describe nor suggest a method as recited in Claim 7. For example, Dobbs does not describe nor suggest a method including optically coupling each of a plurality of diode assemblies with respective scintillator packages and respective collimator arrays by aligning alignment datums of the respective diode assemblies, scintillator packages, and collimator arrays using an alignment tool comprising a body with at least two alignment datums extending thereon, wherein the alignment tool does not form a component of the detector array. Rather, Dobbs describes a detector assembly including detector and anti-scatter modules that are located and aligned on a spine using dowel pins that each form a component of the detector assembly. As such, and for at least this reason, Claim 7 is submitted as patentable over Dobbs.

Claim 8 depends from independent Claim 7. When the recitations of Claim 8 are considered in combination with the recitations of Claim 7, Applicant submits that dependent Claim 8, for at least this reason, is likewise patentable over Dobbs.

Claim 11 recites a method of replacing a detector module in a modular detector assembly including at least one existing module including an alignment datum, wherein the method comprises “removing a module to be replaced from the assembly...providing a replacement module comprising at least one alignment datum...using an alignment tool comprising a body with at least two alignment datums extending thereon to position the

replacement module in the assembly with respect to the existing module...and removing the alignment tool from the assembly once the replacement module has been attached within the assembly.”

Dobbs does not describe nor suggest a method as recited in Claim 11. For example, Dobbs does not describe nor suggest a method including removing an alignment tool from an assembly once a replacement module has been attached within the assembly. Rather, Dobbs describes a detector assembly including detector and anti-scatter modules that are located and aligned on a spine using dowel pins that each form a component of the detector assembly. As such, and for at least this reason, Claim 11 is submitted as patentable over Dobbs.

Claim 13 recites a detector assembly comprising “a flexible member comprising a first side and a second side...a first scintillator array positioned on said first side of said flexible member...and a first collimator array positioned on said second side of said flexible member, said collimator optically coupled to said scintillator array.”

Dobbs does not describe nor suggest a detector assembly as recited in Claim 13. For example, Dobbs does not describe nor suggest an assembly including a first scintillator array positioned on a flexible member, nor a first collimator array positioned on a flexible member. Rather, Dobbs describes detector and anti-scatter modules that are mounted on a spine that is attached to a rotating gantry using a pair of end supports that each include a flexible mounting plate. Dobbs does not describe nor suggest that the spine is flexible. As such, and for at least these reasons, Claim 13 is submitted as patentable over Dobbs.

Claims 14 and 15 depend from independent Claim 13. When the recitations of Claims 14 and 15 are considered in combination with the recitations of Claim 13, Applicant submits that dependent Claims 14 and 15, for at least this reason, are likewise patentable over Dobbs.

Claim 17 recites a detector assembly comprising “a member having a first side and a second side...a diode assembly comprising at least one alignment datum, said diode assembly positioned on said member first side...a scintillator package comprising at least one alignment datum, said scintillator package positioned on said member first side...and a collimator array comprising at least one alignment datum aligned with said diode assembly alignment datum and said diode assembly alignment datum, said collimator array positioned

on said member second side, wherein said diode assembly, said scintillator package, and said collimator are optically coupled.”

Dobbs does not describe nor suggest a detector assembly as recited in Claim 17. For example, Dobbs does not describe nor suggest an assembly including a diode assembly positioned on a first side of a member, a scintillator package positioned on the member first side, and a collimator array positioned on a second side of the member. Rather, Dobbs describes detector and anti-scatter modules that are mounted on the same side of a spine. As such, and for at least this reason, Claim 17 is submitted as patentable over Dobbs.

Claims 18 and 19 depend, directly or indirectly, from independent Claim 17. When the recitations of Claims 18 and 19 are considered in combination with the recitations of Claim 17, Applicant submits that dependent Claims 18 and 19, for at least this reason, are likewise patentable over Dobbs.

Claim 20 recites an imaging system comprising “a radiation source...a computer operationally coupled to said radiation source...and a radiation detector assembly operationally coupled to said computer, said detector assembly comprising...a member having a first side and a second side...a diode assembly comprising at least one alignment datum, said diode assembly positioned on said member first side...a scintillator package comprising at least one alignment datum, said scintillator package positioned on said member first side...and a collimator array comprising at least one alignment datum aligned with said diode assembly alignment datum and said diode assembly alignment datum, said collimator array positioned on said member second side, wherein said diode assembly, said scintillator package, and said collimator are optically coupled.”

Dobbs does not describe nor suggest an imaging system as recited in Claim 20. For example, Dobbs does not describe nor suggest a system including a diode assembly positioned on a first side of a member, a scintillator package positioned on the member first side, and a collimator array positioned on a second side of the member. Rather, Dobbs describes detector and anti-scatter modules that are mounted on the same side of a spine. As such, and for at least this reason, Claim 20 is submitted as patentable over Dobbs.

Claim 21 depends from independent Claim 20. When the recitations of Claim 21 are considered in combination with the recitations of Claim 20, Applicant submits that dependent Claim 21, for at least this reason, is likewise patentable over Dobbs.

For at least the reasons set forth above, Applicant respectfully requests that the Section 102(b) rejection of Claims 1-5, 7-11, 13-15, and 17-21 as being anticipated by Dobbs be withdrawn.

The rejection of Claims 6, 12, and 16 under 35 U.S.C. § 103(a) as being unpatentable over Dobbs is respectfully traversed.

Dobbs is described above.

Applicant respectfully submits that the Section 103 rejection of Claims 6, 16, and 12 is not a proper rejection. The mere assertion that such methods and assemblies would have been obvious to one of ordinary skill in the art does not support a prima facie obvious rejection. Rather, each allegation of what would have been an obvious matter of design choice must always be supported by citation to some reference work recognized as standard in the pertinent art, and the Applicant given an opportunity to challenge the correctness of the assertion or the repute of the cited reference. Applicant has not been provided with the citation to any reference supporting the combinations made in the rejection. The rejection, therefore, fails to provide the Applicant with a fair opportunity to respond to the rejection, and fails to provide the Applicant with the opportunity to challenge the correctness of the rejection. Therefore, Applicant respectfully request that the Section 103 rejection of Claims 6, 12, and 16 be withdrawn.

Moreover, Applicant respectfully submits that obviousness cannot be established by merely suggesting that it would have been an obvious to one of ordinary skill in the art to modify Dobbs. More specifically, it is respectfully submitted that a prima facie case of obviousness has not been established. As explained by the Federal Circuit, “to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant.” In re Kotzab, 54 USPQ2d 1308, 1316 (Fed. Cir. 2000). MPEP 2143.01.

Moreover, the Federal Circuit has determined that:

[I]t is impermissible to use the claimed invention as an instruction manual or “template” to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that “[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.”

In re Fitch, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992). Further, under Section 103, “it is impermissible . . . to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.” In re Wesslau, 147 USPQ 391, 393 (CCPA 1965). Rather, there must be some suggestion, outside of Applicant’s disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicant’s disclosure. In re Vaeck, 20 U.S.P.Q.2d 1436 (Fed. Cir. 1991).

In the present case, neither a suggestion nor motivation to modify Dobbs, nor any reasonable expectation of success, has been shown. Rather, because there is no teaching nor suggestion in the Dobbs for the claimed combinations, the Section 103 rejection appears to be based on a hindsight reconstruction in which isolated portions of Dobbs have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicant requests that the Section 103 rejection of Claims 6, 16, and 12 be withdrawn.

Further, and to the extent understood, Dobbs does not describe nor suggest the claimed combinations, and as such, the presently pending claims are patentably distinguishable from Dobbs. For example, Claim 6 depends from independent Claim 1, which is recited above. As discussed above, Dobbs does not describe nor suggest a method as recited in Claim 1. For example, Dobbs does not describe nor suggest a method including positioning a first scintillator array on a flexible member, nor a method including positioning a first collimator array on a flexible member. Rather, Dobbs describes detector and anti-scatter modules that are mounted on a spine that is attached to a rotating gantry using a pair of end supports that each include a flexible mounting plate. Dobbs does not describe nor suggest that the spine is flexible. As such, and for at least these reasons, Claim 1 is submitted as patentable over Dobbs.

Claim 6 depends from independent Claim 1. When the recitations of Claim 6 are considered in combination with the recitations of Claim 1, Applicant submits that dependent Claim 6, for at least this reason, is likewise patentable over Dobbs.

Moreover, Claim 6 further recites “said positioning a first scintillator array comprises positioning the first scintillator array on a first side of a flexible member comprising graphite.” As admitted on page 4 of the Office Action, Dobbs fails to disclose that spine 28 comprises graphite. As such, and for at least this additional reason, Claim 6 is submitted as being patentable over Dobbs.

Claim 12 recites a method for fabricating a plurality of detector assemblies, wherein the method includes “providing a plurality of diode assemblies each comprising at least one alignment datum...providing a plurality of scintillator packages each comprising at least one alignment datum...providing a plurality of collimator arrays each comprising at least one alignment datum...optically coupling each diode assembly with one respective scintillator package and one respective collimator array by aligning the alignment datums of the respective diode assembly, scintillator package, and collimator array to form a plurality of detector modules...positioning N detector modules on a first member to form a first detector assembly...and positioning M detector modules on a second member to form a second detector assembly, wherein M is not equal to N and the first and second detector assemblies are different sized.”

Dobbs does not describe nor suggest a method as recited in Claim 12. For example, as admitted on page 4 of the Office Action, Dobbs does not describe nor suggest a method including positioning N detector modules on a first member to form a first detector assembly, and positioning M detector modules on a second member to form a second detector assembly, wherein M is not equal to N and the first and second detector assemblies are different sized. As such, and for at least this reason, Claim 12 is submitted as patentable over Dobbs.

Claim 16 depends from independent Claim 13, which is recited above. As discussed above, Dobbs does not describe nor suggest a detector assembly as recited in Claim 13. For example, Dobbs does not describe nor suggest an assembly including a first scintillator array positioned on a flexible member, nor a first collimator array positioned on a flexible member. Rather, Dobbs describes detector and anti-scatter modules that are mounted on a spine that is attached to a rotating gantry using a pair of end supports that each include a flexible

mounting plate. Dobbs does not describe nor suggest that the spine is flexible. As such, and for at least these reasons, Claim 13 is submitted as patentable over Dobbs.

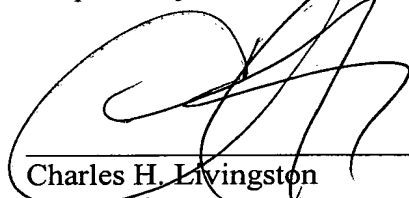
Claim 16 depends from independent Claim 13. When the recitations of Claim 16 are considered in combination with the recitations of Claim 13, Applicant submits that dependent Claim 16, for at least this reason, is likewise patentable over Dobbs.

Moreover, Claim 16 further recites "wherein said flexible member comprises graphite." As discussed above, and as admitted on page 4 of the Office Action, Dobbs fails to disclose that spine 28 comprises graphite. As such, and for at least this additional reason, Claim 16 is submitted as being patentable over Dobbs.

For at least the reasons set forth above, Applicant respectfully requests that the Section 103 rejection be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,

A handwritten signature in black ink, appearing to be "CHL", is written over a horizontal line.

Charles H. Livingston
Registration No. 53,933
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070